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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,745	07/30/2004	Anthony R. Bonaccio	BUR920040077US1	4744
29371	7590	11/15/2005		
CANTOR COLBURN LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			EXAMINER CHOE, HENRY	
			ART UNIT 2817	PAPER NUMBER

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/710,745

Applicant(s)

BONACCIO ET AL.

Examiner

Henry K. Choe

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-28 is/are allowed.
- 6) ☒ Claim(s) 1,4-7 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 2,3,8,9,13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/30/04; 8/9/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 15 is objected to because of the following informalities: in lines 5, 6, 17 and 18, should "desired common-mode output voltage" be --reference voltage--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (Fig. 1 of drawing) in view of Wang (Fig. 2).

Regarding claims 1 and 7, applicant's admitted prior art (Fig. 1 of drawing) discloses all the limitations in the claims except for that the error signal coupled to a body terminal of one or more FET devices included within the fully differential amplifier. Wang (Fig. 2) discloses a fully differential amplifier (100) comprising the error signal (output of 150) coupled to a body terminal (body terminal of Q1 or body terminal of Q2) of one (Q1) or more (Q1 and Q2) FET devices included within the fully differential amplifier (100). It would have been obvious to one of ordinary skill in the art, at the time the invention was made would have found it obvious to have employed the error signal of the comparator coupled to a body terminal of the FET of applicant's admitted prior art (Fig. 1 of drawing), such as taught by Wang (Fig. 2) in order to provide the advantageous benefit of calibrating the dc offset level of the differential output voltage (see column 3, lines 17-19).

Regarding claims 4 and 10, applicant's admitted prior art (Fig. 1 of drawing) further comprising a pair of PFET load devices (M3, M4) which are coupled to a

Art Unit: 2817

respective pair of output terminals (OUT_P, OUT_M) of the fully differential amplifier (Fig. 1 of drawing).

Regarding claims 5 and 11, transistor M7 in Fig. 1 of drawing can be read as the claimed PFET device included in a reference current mirror (transistors M4 and M7 form a reference current mirror) of the fully differential amplifier (100 in Fig. 1 of drawing).

Regarding claims 6 and 12, transistor M6 in Fig. 1 of drawing can be read as the claimed NFET device included in a bias current mirror (transistors M2 and M6 form a bias current mirror) of the fully differential amplifier (100 in Fig. 1 of drawing).

Allowable Subject Matter

Claims 2, 3, 8, 9, 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for Allowance

Claims 15-28 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Regarding claims 2 and 8, the closest prior art of record, applicant's admitted prior art (Fig. 1 of drawing) or combination of applicant's admitted prior art (Fig. 1 of drawing) and Wang (Fig. 2) does not disclose the following limitations: a clamping device coupled to the one or more FETs as to prevent activation of body-to-diffusion diodes therein. Regarding claims 3 and 9, the closest prior art of record, applicant's admitted prior art (Fig. 1 of drawing) or combination of applicant's admitted prior art (Fig. 1 of drawing) and Wang (Fig. 2) does not disclose the following limitations: a frequency compensating device and its functional limitations. Regarding claims 15 and 22, the closest prior art of record, applicant's admitted prior art (Fig. 1 of drawing) or

Art Unit: 2817


combination of applicant's admitted prior art (Fig. 1 of drawing) and Wang (Fig. 2) does not disclose the following limitations: the error signal utilized as an input to a coarse feedback loop.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent numbers (6,140,877; 6,281,753) are the fully differential amplifiers with the common mode feedbacks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Choe whose telephone number is (571) 272-1760.



**HENRY CHOE
PRIMARY EXAMINER**

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